

ABSTRACT

The present disclosure relates to the identification phage lysin from group
5 B streptococci (GBS). The nucleic acid sequence and amino acid sequence of the
GBS phage lysin is disclosed. The GBS phage lysin is a bifunctional protein
comprising a glucosidase and an endopeptidase activity. The endopeptidase
present in the GBS phage lysis has a substrate specificity that has not been
previously reported. The bifunctional GBS phage lysin is effective against groups
10 A, B, C, E and G streptococci. Also described are methods of using the GBS
phage lysin for the prevention and treatment of bacterial infections.